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PUBLIC

REBUTTAL TESTIMONY OF

FORREST E. HILL

ON BEHALF OF

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 2009-2-E

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND CURRENT POSITION.

A. My name is Forrest Hill, 504 Chester Avenue, Annapolis, Maryland. I am President of Energy Publishing, Inc. of Knoxville, Tennessee and of Energy Publishing Pty Ltd of Brisbane, Queensland, Australia. These companies publish newsletters for the coal industry in the United States and all other leading coal-producing countries.

Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR BUSINESS EXPERIENCE.

A. I earned a Bachelor of Science in Industrial Engineering from Washington University of St. Louis in 1958 and a Masters in Business Administration from Utah State University in 1964. For the first 14 years of my career, I worked in industrial engineering and manufacturing management positions. In 1972, I became a consultant and shortly thereafter began working on assignments with mining companies. I established my own company, Hill & Associates, Inc., in 1981 and at that

time began to concentrate my practice primarily on the coal industry. Over the next 21 years, the firm grew in size and became more focused on coal industry markets, performing basic analyses of supply and demand, producing market forecasts, developing fuel procurement strategies and negotiating coal supply contracts. I worked for many utilities, coal suppliers, transportation companies, banks, private investors and public groups such as the World Bank. I retired from full-time consulting at the end of 2002, but have continued to consult on a part-time basis and have remained active in the management of the two Energy Publishing companies.

Q. WHAT IS YOUR ASSIGNMENT IN THIS PROCEEDING?

A. I was asked to undertake two primary tasks:

a) Describe the state of the coal market during the year 2008, including what was driving prices, what happened to price levels throughout that year, and what were the general expectations for future prices as of March and in September of that year.

b) Comment on the recommendations in the testimony of Richard Thomas that South Carolina Electric & Gas Company ("SCE&G" or the "Company") should have engaged in financial hedging for its coal purchases.

Q. WHAT FACTORS WERE DRIVING THE COAL MARKET PRICES IN 2008?

A. These points are summarized in Exhibit No. ___ (FEH-1), and discussed in more detail below. During the latter part of 2007 and 2008, the strength of the overall world economy and several factors unique to the coal industry acted together to drive up prices for all kinds of coal in all markets. The strong worldwide economy resulted in significant increases in demand for the two main coal end-uses – power generation and steel production. The need for coal increased in every country of the world. China and India became large importers of coal to feed their many new coal-fired power plants and their numerous new steel mills. The countries of Eastern Europe were also seeing rapid growth in their developing economies as were the countries of Southeast Asia. Coal demand within the U.S. was spurred by a strong steel industry, by new power plants and by high oil and natural gas prices, which gave coal a favorable position on the power generation supply curve.

Although demand was growing rapidly, supply stagnated in 2008. In Central Appalachia, the region that is the main supply source for SCE&G, production did not increase in response to the rising prices. Although the coal companies tried hard to increase output, several factors held them back, for example:

a) More difficult reserves. The reserve base in Central Appalachia has reached the point where it is no longer possible to open new mines in low-cost mining conditions. Coal seams are thinner and the stripping ratios are increasing.

b) The region has been plagued by labor shortages for several years but the problem reached crisis proportions during 2008. Mines could not find workers to fill the spots available, even though they ended up offering exorbitant wages. Non-union mines began paying around $45 per hour for mining machine operators, as opposed to only about $25 per hour in union mines. The hiring and training of new employees became the single most important factor for many companies.

c) Because of litigation over permitting procedures under Section 404 of the Clean Water Act, it became almost impossible for coal suppliers to obtain a permit for a surface mine. A federal court in West Virginia ruled that the Corps of Engineers had been using improper procedures; and that ruling held up new permits while the ruling went to the Appeals Court in Richmond, Virginia. Without new permits, some companies began to run out of places to work in their existing operations and could not open new mines.

d) The Mine Improvement and New Emergency Response Act of 2006 ("MINER Act"), a new safety law passed after the mine disasters in Utah and West Virginia, imposed new costs on the mines and new labor requirements.

e) High oil, gas and steel prices, in addition to spurring coal demand, also increased mining costs. Natural gas is a key raw material for the production of the explosives widely used in surface mines, and diesel oil is vital to the operation of those mines. Steel is used throughout underground mines for roof bolts and other purposes.

Q. WERE COAL SUPPLIES CONSTRAINED IN OTHER COUNTRIES?

A. Yes. For a variety of reasons, the world's major exporters all were unable to ship as much coal as the market demanded. The Australian ports could not handle all the coal the mines in Queensland and New South Wales could produce for the export market. As a result, long queues of ships (45 – 50 outside Newcastle, Australia alone) were waiting to load coal and overall shipments were far below potential. In South Africa, for over 10 years the government ignored consultants' recommendations to upgrade the mine and rail infrastructure in order to boost exports. Instead of climbing as planned, production and exports declined over the 4 years prior to and including 2008. In Indonesia, the other large coal exporter, the

government decided to hold some coal production off the export market in order to have it available for domestic consumption.

Q. WHY WERE EVENTS OVERSEAS IMPORTANT TO COAL PRICES IN THE UNITED STATES?

A. Because these other countries, which are all lower-cost suppliers to the export market than the U.S., could not perform, consumers in Europe, Latin America, and even Asia wanted U.S. coal. This demand boosted exports, which in turn diverted coal from the U.S. market and also led to problems with rail service as the railroads tended to favor the high-priced export business. Although much of the export demand was for coking coal, many coals that are normally sold into the steam coal market were diverted to coking coal shipments. These coals were generally low in the qualities needed to produce coke, but they could still command significantly higher prices as part of an export coking coal blend than they could in the domestic steam coal market. And, of course, steam coal exports increased as well.

Q. WERE ALL OF THESE FACTORS AFFECTING THE COAL MARKET IN MARCH AND SEPTEMBER OF 2008?

A. Yes. They were in full play in the spring and were still shaping prices and driving the market through September and October and into November. I attended the Coaltrans Conference in Prague, Czech Republic toward the end of October. This annual conference is by far the largest coal

conference in the world and is attended by delegates from every coal-importing and exporting country. Although the problems in the finance industry were being publicized at this time, all of the coal buyers and traders on the steam coal panel agreed that coal was in short supply and that prices would remain firm.

These opinions at the conference in Europe were shared widely in the industry here in the U.S. During the fall of 2008, even into November and December, there was a strong prevailing belief among coal producers that, even though spot market prices had declined significantly, the physical market would support continued high prices in 2009 and beyond. Additionally, there was concern among coal buyers that the lack of availability of coal would continue into 2009. There were three main themes that were prevalent at this time, namely:

a) Prices could not fall below $85 - $110 per ton at the mine without threatening a significant amount of production.

b) Utilities with plentiful stockpiles could afford to wait and see if physical prices would follow the financially traded (OTC and NYMEX) prices downward; those with lower stocks had to move sooner on new purchases.

c) A big concern for 2009 would be getting the coal delivered. People remained concerned that the problems of 2008 would be repeated in 2009.

Q. HOW DID SPOT COAL PRICES MOVE IN THE YEARS PRECEDING 2008 AND IN THAT YEAR?

A. Exhibit No. ___ (FEH-2) shows a graph of over-the-counter ("OTC") mine-mouth freight on board ("fob") prices for the "prompt quarter" from early 2002 through early 2009. It is important to note that this graph does not show prices in the physical market. That is, physical prices, those paid by utilities that actually need the coal and have contracts for delivery, might be higher or lower than the OTC market at any given time. However, the trends in physical prices do follow the trends of the OTC prices.

The graph shows that OTC prices moved from around $25 - $30 per ton during 2002 and 2003 up to around $60 in 2004 and into early 2006. Prices then fell back into the $40 per ton range until early in 2008. At that time, prices took an unprecedented jump, due to the factors discussed earlier. Actual trades peaked at around $156 per ton, and the average of bid-ask prices went over $160 for a brief period in early July. The market remained near its peak through September. [redacted] As the full impact of the financial crisis and growing recession came to be felt, spot prices began to slide but were still around $75 early in December. At the time, there was considerable

doubt in the market about whether coal could be purchased for physical delivery at the prices shown in the OTC market for financial trades. Because of the high costs at many Central Appalachian mines, that doubt continues today, even though OTC prices have continued to slide downward.

Q. WHAT DO OTC PRICES TELL US ABOUT THE MARKET'S EXPECTATIONS FOR FUTURE PRICES?

A. In general, prices for "next year" (for example, calendar year 2009 deliveries priced during 2008) were slightly lower than the current market prices as shown by the "prompt quarter" data in Exhibit No. ___ (FEH-2). The forward curve for next year pricing is shown in Exhibit No. ___ (FEH-3). This graph indicates that the peak in forward prices occurred at the same time as the peak in the current market, but was slightly lower than the current market measure. Prices in 2008 for 2009 deliveries reached $148.75 in early July 2008, fell to about $117 by early October 2008 and were down to $63.98 in early December 2008. [redacted]

Q. PLEASE COMMENT ON THE SUGGESTION BY MR. THOMAS THAT SCE&G SHOULD HAVE HEDGED ITS COAL REQUIREMENTS FOR 2008.

A. I know of no regulated electric utility that utilizes a financial hedging program to reduce risks in coal procurement. Most utilities have determined they can employ physical hedges by keeping some tonnage on the spot market and staggering contract terms so that not all tonnage is exposed to market variations at any given time, the exact strategy that SCE&G employs.

There is also another reason why utilities do not financially hedge coal – over a long period of time, the costs would likely outweigh the benefits. This is true because coal prices are normally very competitive and have declined over long periods of time. There have been a few periods during which prices have risen, most notably the oil crisis of the middle and late 1970's and during the world-wide economic bubble of 2008. However, these periods are rare and brief. [redacted]

Exhibit No. ___ (FEH-4) shows a history of annual percentage changes in average U.S. prices for bituminous coal from 1950 through 2007. I draw several conclusions from this graph:

a) Over this 58-year period, prices fell in 41 of the years, or 70.7% of the time. Prices rose in only 17 years.

[redacted]Normally, the price increases were modest; only 3 years saw increases of more than 5%. [redacted]

[redacted]

c) Therefore, a utility would lose money over the long term if it employed a strategy of hedging its coal supply with call options.

Q. IN THE DISCUSSION ABOVE, YOU HAVE DEALT WITH THE ECONOMIC DISADVANTAGES OF FINANCIAL HEDGES FOR COAL PROCUREMENT. ARE THERE ANY OTHER CONSIDERATIONS?

A. Yes. Mr. Thomas implied that SCE&G should have purchased call options or swaps during 2007 and should not have entered into certain contracts for coal supply and some of the spot arrangements that it put into effect during 2008. Such a course of action as Mr. Thomas recommends could have been disastrous for the Company and its customers because:

a) The coal available on the OTC market may have quality problems that would make it unusable in the Company's boilers. OTC contracts do not specify many of the important quality measures of the coal (such as ash, fusion temperature, and hardness). Thus, the coal provided under a call option or swap agreement, if it were provided, might not be usable. During a period such as 2008 when many suppliers were unable or unwilling to ship their full contract commitments, SCE&G might easily have exhausted its coal inventory if the coal supplies

available on the OTC market were unusable because of quality problems.

b) The risk of relying on financial hedges for physical performance is even greater than the quality issue alone because the parties on the sell side of a swap or call option are not obligated to ship at all. They are only obligated to make a financial payment if the buyer asks for a shipment and cannot get it. In fact, many of the financial hedges in coal do not become physical; that is, they are cleared financially and no coal is ever shipped. In a tight market, such as the entire year of 2008, SCE&G would have faced a strong possibility of having to cut power production for lack of coal if it had been dependent on calls or swaps for coal supply. Even though the Company might have recovered the cost of the coal that did not ship, the un-recovered costs to ratepayers, due to generation curtailments, could have been tremendous.

Q. HAVE YOU READ MR. HAIMBERGER'S REBUTTAL TESTIMONY RESPONDING TO THE DIRECT TESTIMONY OF MR. RICHARD THOMAS?

A. Yes I have.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes it does.

Coal Market Drivers in 2008 – The Perfect Storm

- Booming economy world-wide.
- China and India building many coal-fired power plants and steel mills.
- Steel mills in Eastern Europe – new markets for U.S. coking coals.
- China switch from major steam coal exporter to large importer.
- High oil and gas prices – boosted domestic. demand for coal and increased costs of mining.
- Production constraints in Central Appalachia.
  - More difficult reserves
  - Labor shortages curtailed production and raised costs (to 2x union mine costs in some cases)
  - Litigation halted Section 404 permits for surface mines.
- Steam coal switching to the coking coal market.
- The MINER Act increased costs and diverted labor in underground mines.
- High ocean freight rates made the U.S. more competitive in Atlantic markets.
- Supply constraints among the major exporters:
  - Australian ports jammed, with queues of 45-50 ships waiting to load
  - South African exports stagnant because of lack of infrastructure investments
  - Indonesian government policy to set aside coal for the domestic economy.

Exhibit No. ___ (FEH-2)

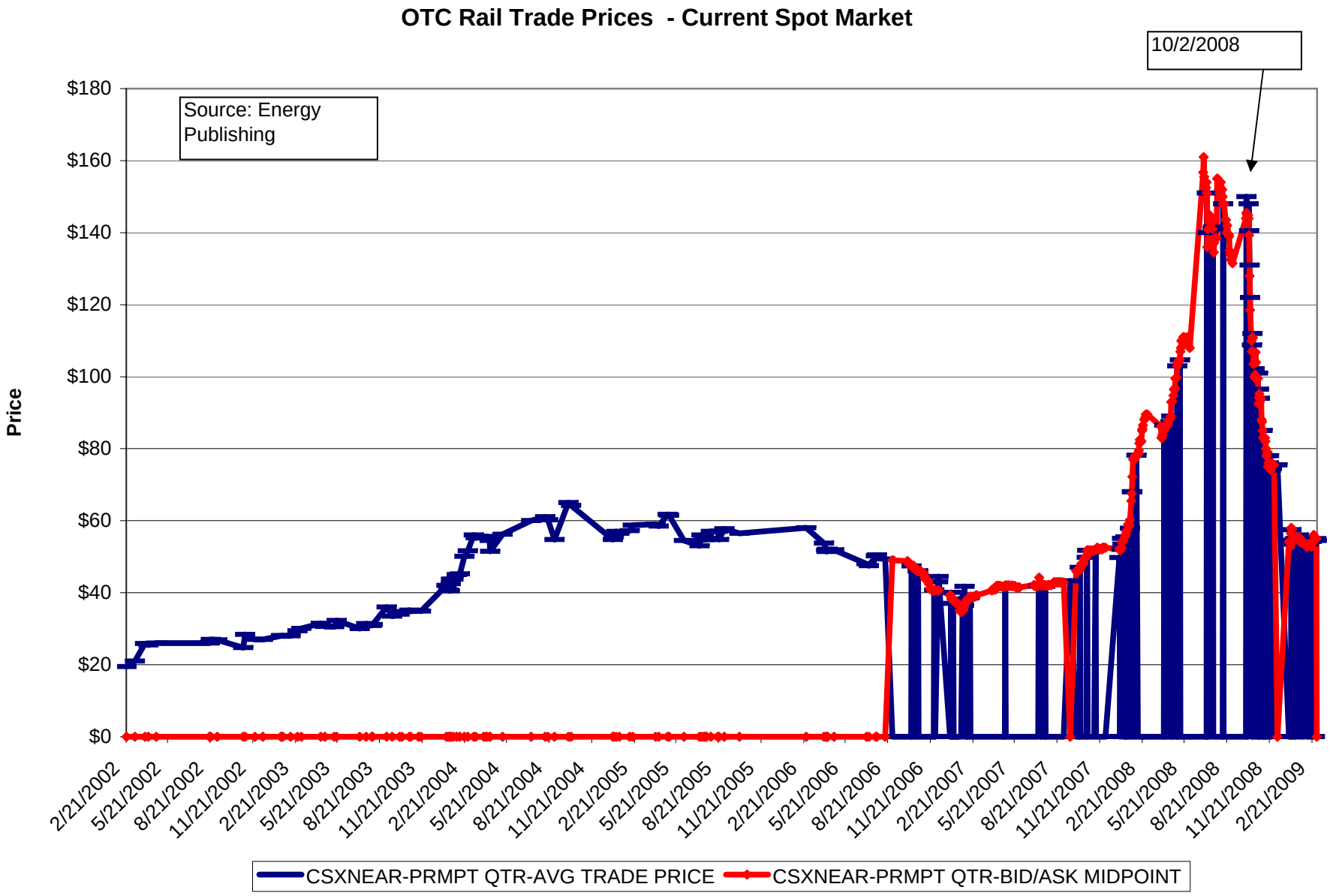
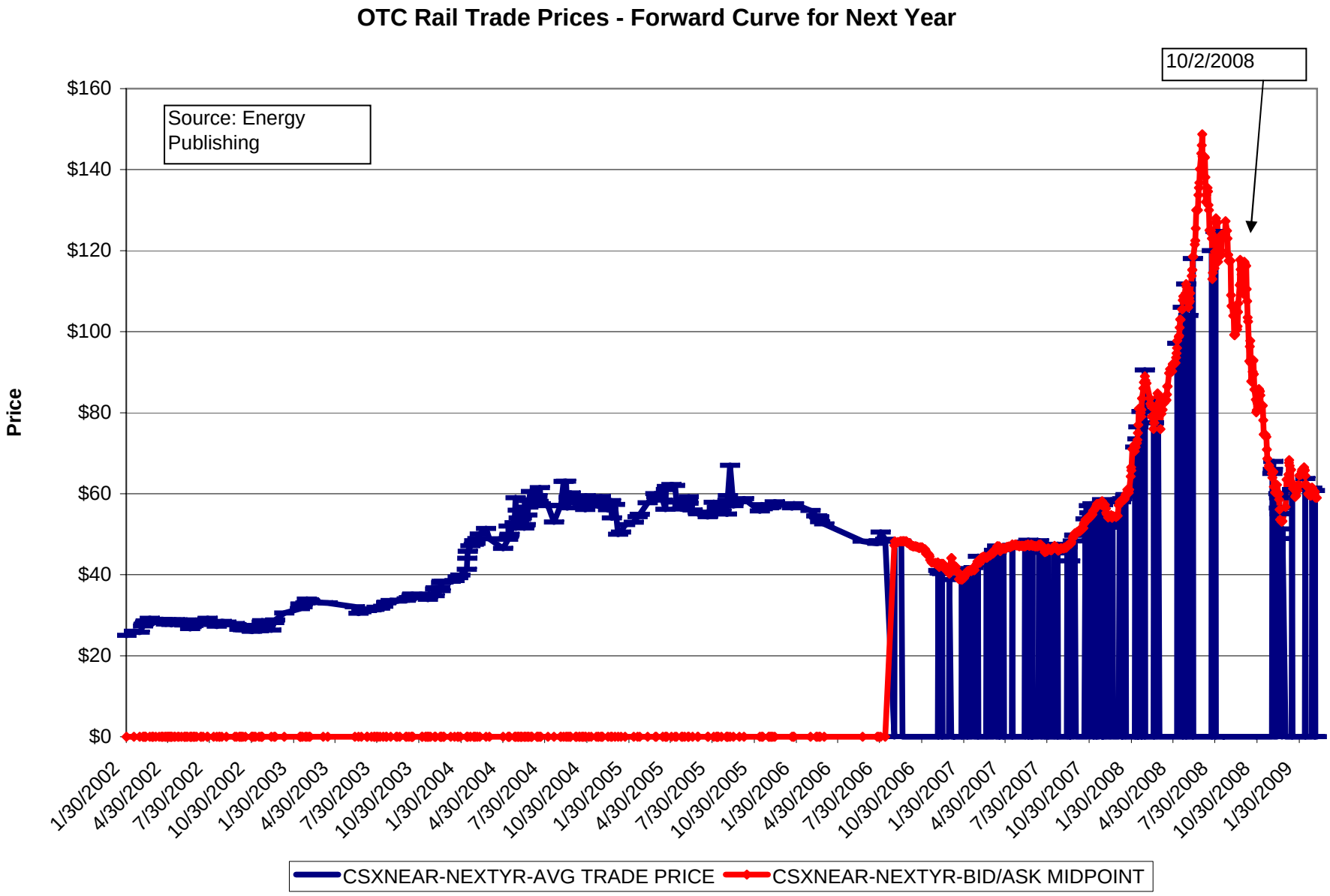
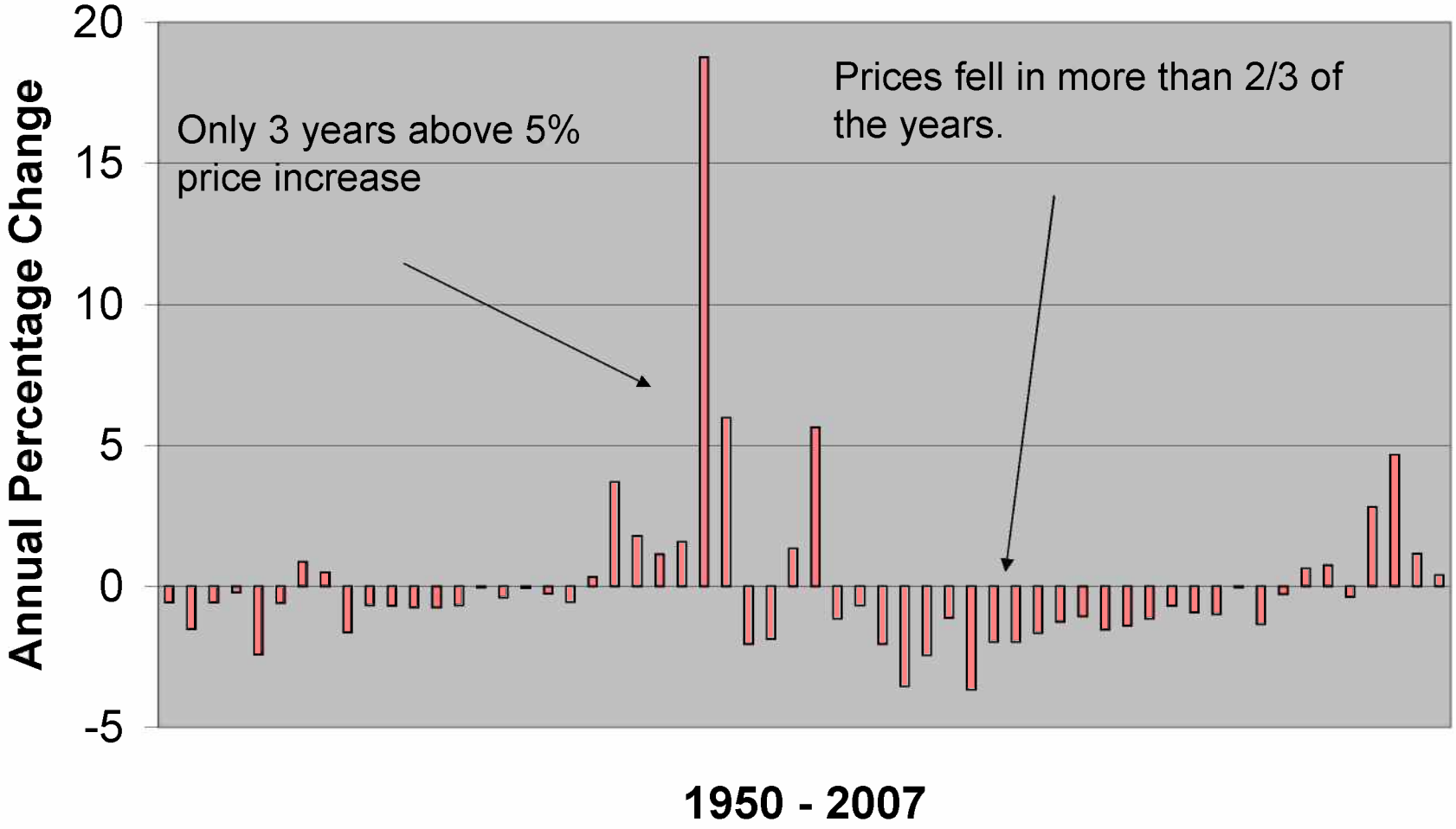


Exhibit No. ___ (FEH-3)



Annual Changes in Average U.S. Bituminous Coal Prices - Real Dollars



Source: U.S. Energy Information Agency